

DOCKET NO. 146800
Serial No. 10/655,988
Second Supplemental Protest

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PATENT

OCT 14 2004

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re S. N. 10/655,988

Application to Reissue U.S. Pat. 5405,911

Filed : Sept. 5, 2003

Inventor : Handlin, Jr., et al.

For: Butadiene Polymers Having Terminal Functional Groups

SECOND SUPPLEMENTAL PROTEST

This paper is being filed in response to Patent Owner's "RESPONSE TO THE PROTEST UNDER 37 C.F.R. §1.291" (RESPONSE) which was transmitted to the USPTO on April 30, 2004. Protestor's delay in responding is due in part to the fact that Patent Owner did not serve Protestor with a copy of said RESPONSE until Protestor's attorney discovered in July in the PALM/PAIR database that Protestor filed the RESPONSE.

Patent Owner's RESPONSE alleges several defects in Protestor's Yoo declaration.

The first alleged defect is that Dr. Yoo did not state

"whether he obtained a sample of the original polymer made at the time of the paper, that is prior to 1989, or did he acquire a sample of polymer made more recently. It is highly unlikely that he was able to obtain the exact matching material. If newly made, then it would have been expected that there would be some variation in the properties. If the polymer is the same one described in the AM reference, then it would very likely be degraded by now."

Protestor disagrees. Dr. Yoo obtained recently manufactured Krasol LBH-P 2000 and Krasol LBH-P 5000 hydroxyl-terminated polybutadienes as the starting materials for his hydrogenations from Kaucuk, located in Kralupy, Czech Republic, which is part of Unipetrol, which is, in turn, the parent of Chemopetrol, also of Kralupy, Czech Republic, and the source of the Bouchal HO-terminated telechelic polybutadiene (HO-LBA) the

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PATENT

Synthetic Rubber Research Institute-Chemopetrol, Kralupy of Czech Republic, according to AM.

Dr. Yoo did not obtain Krasol product made in 1989, but the recently manufactured products were made by the same procedures, namely, the anionic polymerization of butadiene on a dilithium catalyst and functionalized with ethylene oxide, developed by the same Czech organization at the same location. Further, the analysis of the product Krasol LBH-P 5000 with respect to microstructure and functionality was nearly identical to the one reported in the Bouchal reference.

The Krasol products obtained by Dr. Yoo are therefore the same as those used in the AM reference in all material respects.

The second defect in the Yoo Declaration alleged by Patent Owner pertains to viscosity measurement technique. Protestor notes that

“[A]ll viscosities are not the same. They depend on test geometry and shear rate to state just two factors. No description of the methodology is given in the Declaration so it is impossible to judge if the viscosities reported there correspond to those disclosed and relied upon by Patentees. Therefore the Declaration does not present a reliable viscosity measurement.”

Dr. Yoo determined viscosities by a Brookfield DV-III Programmable Rheometer at room temperature. This measurement of viscosity has been extremely reproducible. A supplemental Declaration by Dr. Yoo reflecting this point accompanies this paper.

The third defect in the Yoo Declaration alleged by Patent Owner is that

“it is simply not known what if any precautions were taken to ensure that solvating effects were not present during the viscosity measurements.”

As Dr. Yoo states in the accompanying supplemental declaration, he used heptane as the solvent for hydrogenation. The heptane solvent was completely removed at the end of hydrogenation during the workup *in vacuo*. Therefore this concern raised by Patent Owner is not justified.

DOCKET NO. 146800
Serial No. 10/655,988
Second Supplemental Protest

PATENT

The fourth defect alleged by Patent Owner in the Yoo Declaration is that "Dr. Yoo employed a different hydrogenation method from the Bouchal reference."

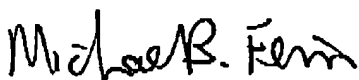
As Dr. Yoo states in the accompanying supplemental declaration, he used a different catalyst than Bouchal, a heterogeneous Ru/Carbon catalyst, instead of the homogeneous catalyst of the references. However, Dr. Yoo's method yielded the hydrogenated product with most of the hydroxyl end group intact, which was the same as Bouchal reported at p. 179, Table 3, Row 1, where the reference method also obtained the same 95% hydrogenated product with >95% OH retention.

As Dr. Yoo states in the supplemental declaration,

"Viscosity of the resultant polymer was determined by me, using a Brookfield DV-III Programmable Rheometer at room temperature, to be 114,000 centipoise at room temperature, and therefore a ratio of viscosity (poise at room temperature) to peak molecular weight raised to the 3.4 power of 0.3×10^{-9} , and therefore within the scope of the claims of the above-referenced reissue application, which claimed an upper limit of 2.0×10^{-9} in some claims, and in 1.0×10^{-9} other claims."

In conclusion, the questions raised by Patent Owner with regard to the original Yoo Declaration have been answered by this paper and the accompanying Supplemental Declaration of Dr. Yoo. There should be no remaining doubt that the invention was anticipated or obvious over the prior art and the present claims of this reissue application should be rejected.

Respectfully submitted



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DOCKET NO. 146800
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Certificate of Service

I hereby certify that this paper is being served today Oct. 14, 2004 as follows:

1. By mailing a true and correct copy of this document and exhibits to Gene L. Tyler, Madan, Mossman & Srian, 2603 Augusta, Suite 700, Houston, TX 77057 by first class mail with proper postage affixed.
2. By facsimile to the USPTO central fax number (703) 872-9306 today

Michael B. Fein

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